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## Occupational Employment and Wages in Washington-Arlington-Alexandria – May 2015

Workers in the Washington-Arlington-Alexandria Metropolitan Statistical Area had an average (mean) hourly wage of \$31.69 in May 2015, 36 percent above the nationwide average of \$23.23, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, average wages in the local area were significantly higher than their respective national averages in 21 of the 22 major occupational groups.

When compared to the nationwide distribution, Washington employment shares were significantly higher in 9 of the 22 occupational groups including business and financial operations; computer and mathematical; and management. Conversely, 12 groups had employment shares significantly below their national representation; these groups included production; transportation and material moving; and office and administrative support. (See [table A](#) and box note at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and Washington metropolitan area, and measures of statistical significance, May 2015**

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Washington		United States	Washington	Percent difference <sup>(1)</sup>	
Total, all occupations.....	100%	100%		\$23.23	\$31.69	*	36
Management.....	5.0	7.5	*	55.30	66.47	*	20
Business and financial operations.....	5.1	9.8	*	35.48	43.65	*	23
Computer and mathematical.....	2.9	7.4	*	41.43	49.04	*	18
Architecture and engineering.....	1.8	2.0	*	39.89	47.83	*	20
Life, physical, and social science.....	0.8	2.0	*	34.24	47.30	*	38
Community and social service.....	1.4	1.3	*	22.19	27.38	*	23
Legal.....	0.8	2.3	*	49.74	65.28	*	31
Education, training, and library.....	6.2	6.3		25.48	29.63	*	16
Arts, design, entertainment, sports, and media.....	1.3	2.3	*	27.39	36.48	*	33
Healthcare practitioners and technical.....	5.8	4.7	*	37.40	43.49	*	16
Healthcare support.....	2.9	2.1	*	14.19	15.70	*	11
Protective service.....	2.4	2.9	*	21.45	26.19	*	22
Food preparation and serving related.....	9.1	8.2	*	10.98	12.24	*	11
Building and grounds cleaning and maintenance.....	3.2	3.6	*	13.02	13.77	*	6
Personal care and service.....	3.1	2.9	*	12.33	14.48	*	17
Sales and related.....	10.5	8.7	*	18.90	20.43	*	8
Office and administrative support.....	15.8	13.6	*	17.47	20.63	*	18

**Table A. Occupational employment and wages by major occupational group, United States and Washington metropolitan area, and measures of statistical significance, May 2015 - Continued**

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Washington		United States	Washington		Percent difference <sup>(1)</sup>
Farming, fishing, and forestry.....	0.3	0.1	*	12.67	18.13	*	43
Construction and extraction.....	4.0	3.7	*	22.88	23.09		1
Installation, maintenance, and repair.....	3.9	3.0	*	22.11	25.21	*	14
Production.....	6.6	1.6	*	17.41	19.77	*	14
Transportation and material moving.....	6.9	4.2	*	16.90	19.30	*	14

(1) A positive percent difference measures how much the mean wage in Washington is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Washington had 220,390 jobs in the computer and mathematical group, accounting for 7.4 percent of local area employment, significantly larger than the 2.9-percent share nationally. The average hourly wage for this occupational group locally was \$49.04, significantly higher than the national average of \$41.43.

With employment of 32,580, applications software developers was the largest occupation within the computer and mathematical group in the Washington area, followed by systems software developers (28,720) and computer systems analysts (26,150). Among the higher paying jobs were computer and information research scientists and systems software developers, with mean hourly wages of \$59.85 and \$56.38, respectively. At the lower end of the wage scale were computer user support specialists (\$29.17) and computer network support specialists (\$37.01). (Detailed occupational data for computer and mathematical are presented in [table 1](#); for a complete listing of detailed occupations available go to [http://www.bls.gov/oes/current/oes\\_47900.htm](http://www.bls.gov/oes/current/oes_47900.htm).)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area as it does nationally. In the Washington metropolitan area, above-average concentrations of employment were found in nearly all of the detailed occupations within the computer and mathematical group. For instance, information security analysts were employed at 5.7 times the national rate in Washington, and statisticians, at 6.9 times the U.S. average. On the other hand, actuaries had a location quotient of 1.0 in Washington, meaning the local employment share in this particular occupation was equal to the national share.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the District of Columbia Department of Employment Services, the Virginia Employment Commission, the Maryland Department of Labor, Licensing, and Regulation, and WorkForce West Virginia.

## **Notes on Occupational Employment Statistics Data**

With the issuance of data for May 2015, the OES program has incorporated redefined metropolitan area definitions as designated by the Office of Management and Budget. OES data are available for 394 metropolitan areas, 38 metropolitan divisions, and 167 OES-defined nonmetropolitan areas. A listing of the areas and their definitions can be found at [www.bls.gov/oes/current/msa\\_def.htm](http://www.bls.gov/oes/current/msa_def.htm).

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

### **Technical Note**

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2015 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2015, November 2014, May 2014, November 2013, May 2013, and November 2012. The overall national response rate for the six panels is 73.5 percent based on establishments and 69.6 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.9 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Washington-Arlington-Alexandria Metropolitan Statistical Area included 16,887 establishments with a response rate of 66 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2015 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### **Metropolitan area definitions**

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Statistical Area** includes the

District of Columbia; Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford, and Warren Counties, and Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park Cities in Virginia; Calvert, Charles, Frederick, Montgomery, and Prince George's Counties in Maryland; and Jefferson County in West Virginia.

### **Additional information**

OES data are available on our regional web page at <http://www.bls.gov/regions/mid-atlantic>. Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Washington-Arlington-Alexandria Metropolitan Statistical Area, May 2015**

Occupation <sup>(1)</sup>	Employment <sup>(2)</sup>		Mean wage	
	Level	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Computer and mathematical occupations.....	220,390	2.5	\$49.04	\$102,010
Computer and information research scientists.....	3,300	6.0	59.85	124,490
Computer systems analysts.....	26,150	2.2	48.56	101,010
Information security analysts.....	10,910	5.7	52.59	109,390
Computer programmers.....	8,840	1.4	47.08	97,930
Software developers, applications.....	32,580	2.0	53.17	110,600
Software developers, systems software.....	28,720	3.4	56.38	117,260
Web developers.....	5,670	2.1	41.03	85,350
Database administrators.....	5,900	2.4	46.45	96,620
Network and computer systems administrators.....	20,840	2.6	47.97	99,790
Computer network architects.....	10,260	3.2	54.66	113,700
Computer user support specialists.....	19,260	1.5	29.17	60,670
Computer network support specialists.....	9,150	2.3	37.01	76,980
Computer occupations, all other.....	26,230	5.4	52.97	110,180
Actuaries.....	420	1.0	69.96	145,510
Mathematicians.....	430	6.2	66.16	137,620
Operations research analysts.....	6,760	3.3	51.61	107,360
Statisticians.....	4,450	6.9	48.74	101,370
Mathematical science occupations, all other.....	(5)	(5)	37.02	76,990

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not available.